ABSTRACT OF THE DISCLOSURE

The apparatus according to the present invention adds a sequence of instructions for recording a maximum of two sets of values assigned to variables in the procedure under the first execution and whose appearance frequencies can reach 50% or more and their appearance frequencies to the intermediate data of a source program to obtain primary profile information after the end of a first execution. Further it adds another sequence of instructions for recording the appearance frequencies of the values of the primary profile information and the execution frequency of the procedure to the intermediate data to obtain final profile information after the end of a second execution.   Then, it calculates a value whose appearance frequency with respect to a variable is 50% or more on the basis of the final profile information to optimize the procedure regarding this value and thereby generate an object program.